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4401 Great America Parkway
Santa Clara, CA 95054

Dual Synchronous PMC Module *Supplement*

NORTEL NETWORKS™

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European Requirements Only

EN 55 022 Statement

This is to certify that the Nortel Networks Dual Synchronous PMC Module is shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC, Article 4a. Conformity is declared by the application of EN 55 022 Class A (CISPR 22).

Warning: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take appropriate measures.

Achtung: Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten, in welchen Fällen der Benutzer für entsprechende Gegenmaßnahmen verantwortlich ist.

Attention: Ceci est un produit de Classe A. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l’utilisateur de prendre les mesures spécifiques appropriées.

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Canada Requirements Only

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Dual Synchronous PMC Module) does not exceed the Class A limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Règlement sur le brouillage radioélectrique du ministère des Communications

Cet appareil numérique (Dual Synchronous PMC Module) respecte les limites de bruits radioélectriques visant les appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada.

Canada Requirements Only *(continued)*

Canada CS-03 Rules and Regulations

Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent the degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Notice: For equipment using loopstart lines, please note that the Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5. The REN is located on the "FCC Rules Part 68" label located on the bracket of the module, or on the back of the unit.

Canada CS-03 -- Règles et règlements

Avis: L'étiquette d'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme aux normes de protection, d'exploitation et de sécurité des réseaux de télécommunications, comme le prescrivent les documents concernant les exigences techniques relatives au matériel terminal. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être coordonnées par un représentant désigné par le fournisseur. L'entreprise de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

Avertissement: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

Avis: Veuillez prendre note que pour tout appareillage supportant des lignes de type "loopstart," l'indice d'équivalence de la sonnerie (IES) assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être raccordés à une interface. La terminaison d'une interface téléphonique peut consister en une combinaison de quelques dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5. Le REN figure sur l'étiquette "FCC Rules Part 68" située sur le support du module ou à l'arrière de l'unité.

FCC Part 68 Compliance Statement

This equipment complies with Part 68 of FCC Rules. All direct connections to telephone network lines must be made using standard plugs and jacks compliant with FCC Part 68. Please note the following:

1. You are required to request service from the telephone company before you connect the unit to a network. When you request service, you must provide the telephone company with the following data:
   - When you request T1 Service, you must provide the telephone company with
     -- The Facility Interface Code

        Provide the telephone company with all the codes below:

        - 04DU9-BN (1.544 MB, D4 framing format)
        - 04DU9-DN (1.544 MB, D4 framing format with B8ZF coding)
        - 04DU9-1KN (1.544 MB, ESF framing format)
        - 04DU9-1SN (1.544 MB, ESF framing format with B8ZF coding)
        - 04DU9-1ZN (1.544 MB, ANSI ESF and ZBTSI without line power)

        The telephone company will select the code it has available.

     -- The Service Order Code(s) (SOC): 6.0F

     -- The required Universal Service Order Code (USOC) jack: RJ48C
2. Your telephone company may make changes to its facilities, equipment, operations, or procedures that could affect the proper functioning of your equipment. The telephone company will notify you in advance of such changes to give you an opportunity to maintain uninterrupted telephone service.
3. If the unit causes harm to the telephone network, the telephone company may temporarily discontinue your service. If possible, they will notify you in advance, but if advance notice is not practical, you will be notified as soon as possible and will be informed of your right to file a complaint with the FCC.
4. If you experience trouble with the unit, please contact the Nortel Networks Technical Solutions Center in your area for service or repairs. Repairs should be performed only by service personnel authorized by Nortel Networks.

United States	1-800-2LANWAN
Valbonne, France	33-4-92-96-69-68
Sydney, Australia	61-2-9927-8800
Tokyo, Japan	81-3-5740-1700

5. You are required to notify the telephone company when you disconnect the unit from the network.

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Preface

The Dual Synchronous PMC Module contains two full-duplex synchronous serial ports to provide Circuit Emulation Service (CES) over the WAN.

In this guide, the Passport™ 5430 Multiservice Access Switch is referred to as the Passport 5430.

Before You Begin

This guide is intended for qualified service personnel who are installing the Passport 5430 for the first time or who need to install or replace any Passport 5430 customer-replaceable unit (CRU). A qualified service person should have appropriate technical training and experience and be aware of the hazards involved in installing and replacing CRUs.

Before installing the Passport 5430, ensure that all network wiring has been installed on the premises using standard cable-system practices.

Before turning on the Passport 5430 for the first time, contact your network administrator to determine which software configuration option to use.

Text Conventions

This guide uses the following text conventions:

bold text	Indicates command names and options and text that you need to enter. Example: Enter the **diags** command.
italic text	Indicates new terms, book titles, and variables in command syntax descriptions.

Acronyms

This guide uses the following acronyms:

CRU	customer-replaceable unit
IP	Internet Protocol
LED	light emitting diode

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- The “CD ROMs” section lists available CDs.
- The “Guides/Books” section lists books on technical topics.
- The “Technical Manuals” section lists available printed documentation sets.

How to Get Help

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If you purchased a Nortel Networks service program, contact one of the following Nortel Networks Technical Solutions Centers:

Technical Solutions Center	Telephone Number
Billerica, MA	800-2LANWAN (800-252-6926)
Santa Clara, CA	800-2LANWAN (800-252-6926)
Valbonne, France	33-4-92-96-69-68
Sydney, Australia	61-2-9927-8800
Tokyo, Japan	81-3-5740-1700

Chapter 1
Using the Dual Synchronous PMC Module

This document supplements *Installing and Operating the Passport 5430 Multiservice Access Switch*. Follow the hardware installation steps in that manual, then refer to this document for information specific to the Dual Synchronous PMC module.

Warning: The Dual Synchronous PMC module is designed to operate in the Passport 5430 Multiservice Access Switch only. Attempting to use the Dual Synchronous PMC Module in any other product may be hazardous and invalidates the regulatory approval.

Installing the Dual Synchronous PMC Module

To install a PMC module on the expansion card:

1. **Attach an antistatic wrist strap.**

Caution: Electrostatic discharge can damage hardware. You must wear the antistatic wrist strap whenever you handle printed circuit boards.

2. **If the expansion slot contains a filler panel, push it out from behind the card bezel (Figure 1-1).**

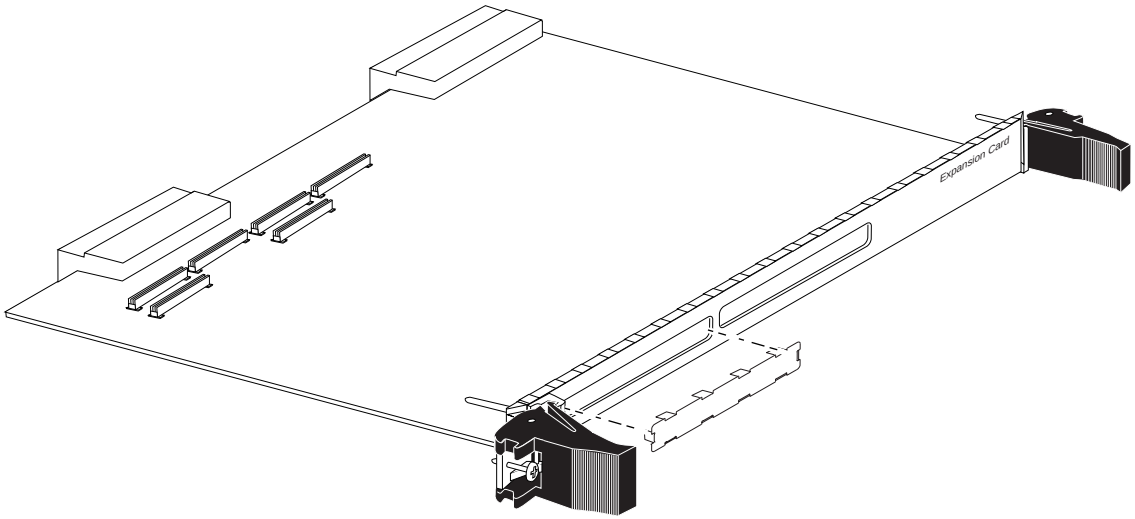

Figure 1-1. Removing the PMC Module Filler Panel

3. **Holding the Dual Synchronous PMC Module with the connectors facing down, slide it into the opening on the expansion card (Figure 1-2).**
4. **Press down to seat the PMC module firmly into the sockets (Figure 1-2).**

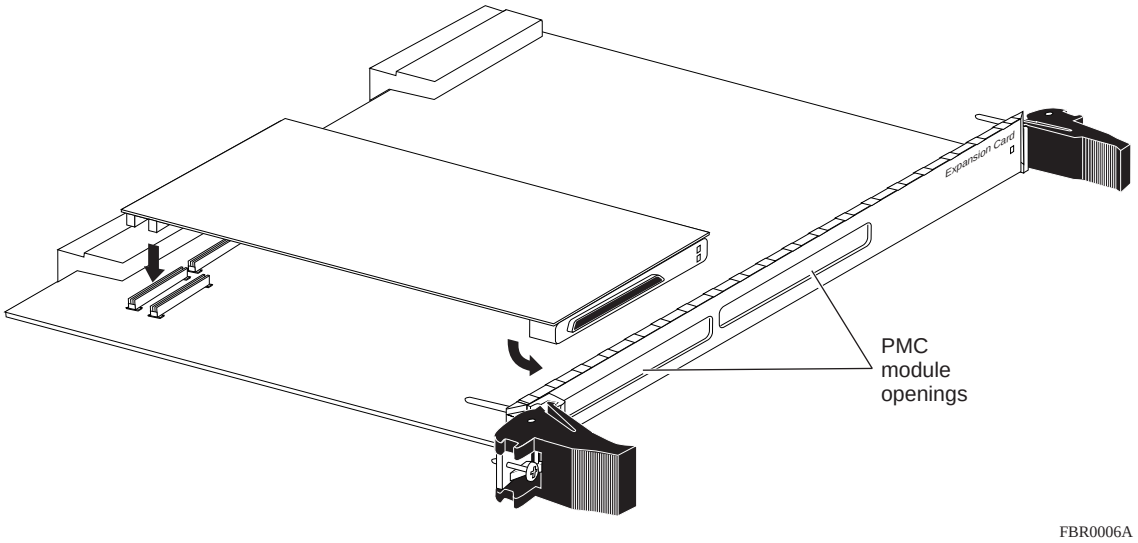

Figure 1-2. Installing the Dual Synchronous PMC Module

5. **Flip the expansion card upside down so that the component side is facing down (Figure 1-3).**

6. **Insert and tighten the screws to secure the PMC module to the expansion card (Figure 1-3).**

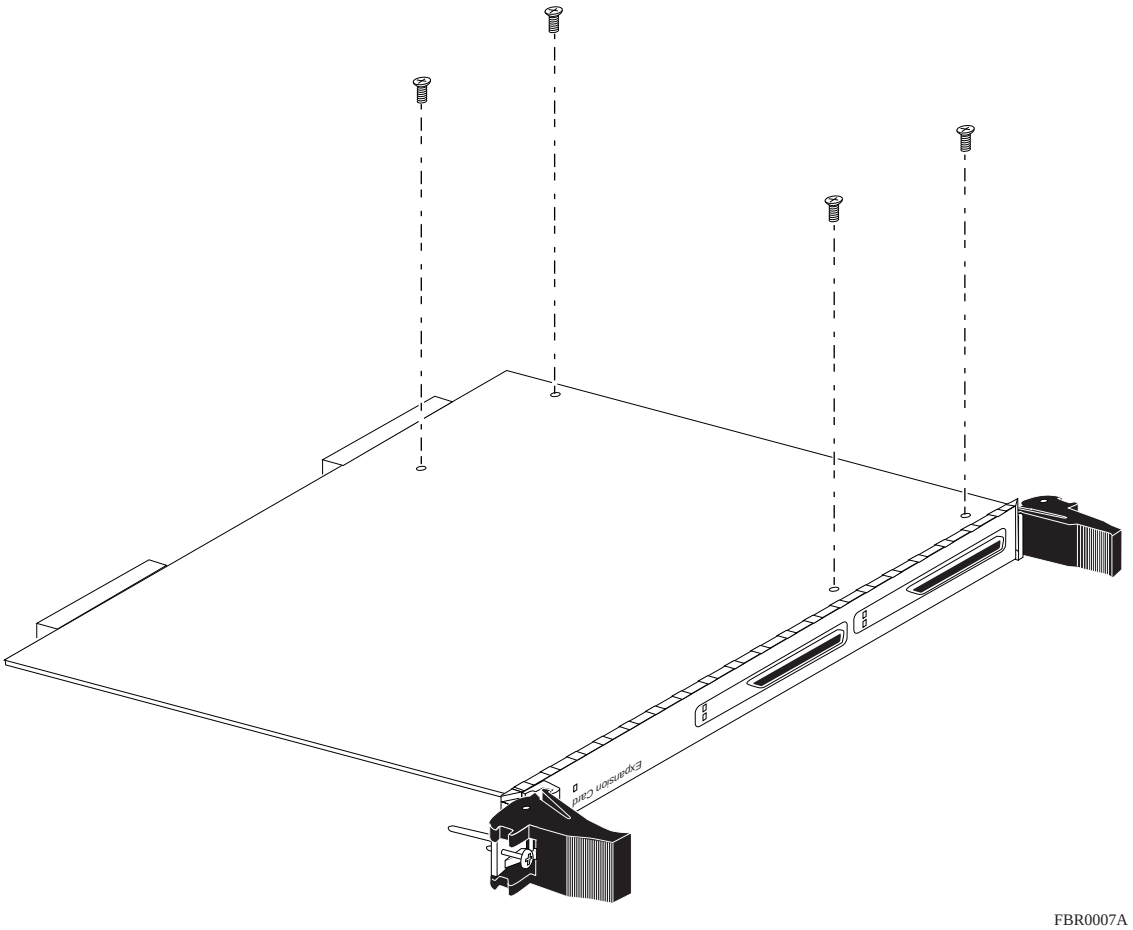

Figure 1-3. Securing the PMC Module to the Expansion Card

7. **Install the expansion card into the chassis.**

   For instructions, see *Installing an Expansion Card in the Passport 5430 Multiservice Access Switch.*

Attaching Cables

You install the Dual Synchronous PMC Module onto the expansion card . See *Installing an Expansion Card in the Passport 5430 Multiservice Access Switch* for the complete installation procedure.

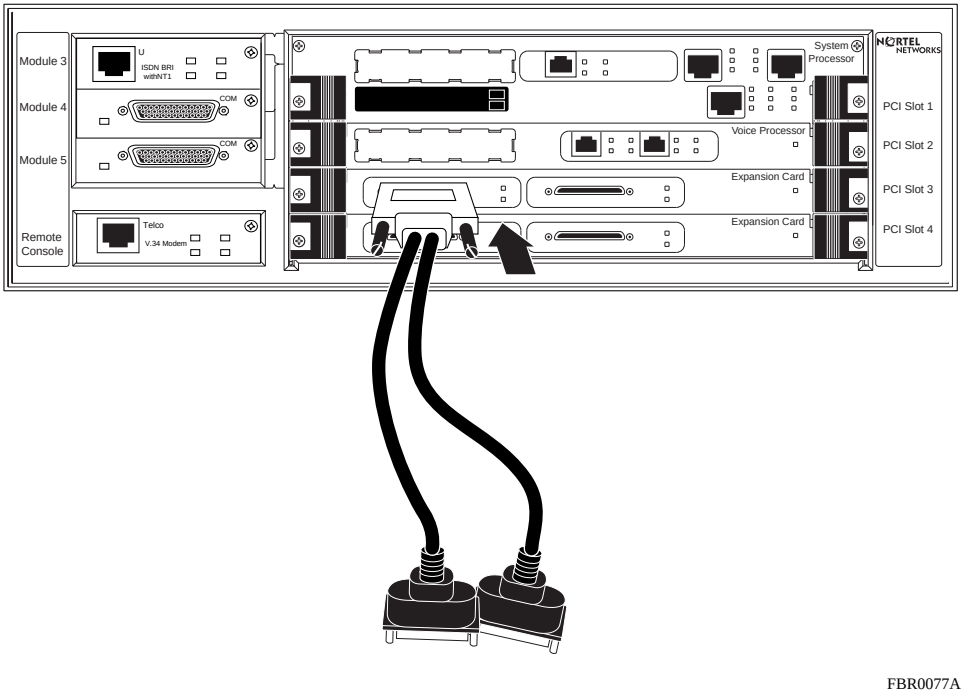

Figure 1-4. Dual Synchronous PMC Module Cable Connection

To attach the synchronous cable:

1. **Push the synchronous cable onto the connector on the installed Dual Synchronous PMC Module (Figure 1-4).**
2. **Tighten the captive screws.**

Interpreting LEDs

Each Dual Synchronous PMC module has two LEDs (Figure 1-5).

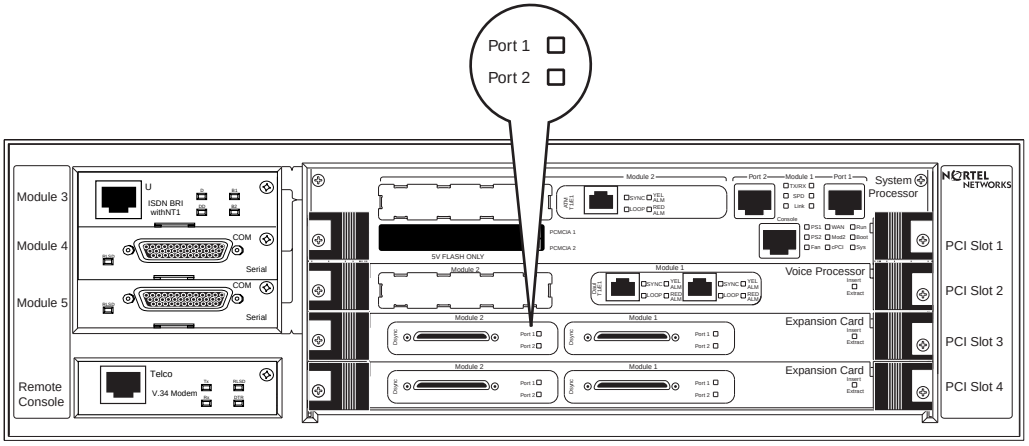

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Figure 1-5. Dual Synchronous PMC Module LEDs

Table 1-1 describes the functions of the Dual Synchronous PMC module's LEDs.

Table 1-1. Dual Synchronous PMC Module LED Functions

Label	Color	Meaning
Port 1	Green	Lights when data carrier is detected.
Port 2	Green	Lights when data carrier is detected.

Completing Software Configuration

Once you have successfully installed the Dual Synchronous PMC module, complete the following software configuration tasks using instructions found in the documentation:

Configuration Task	Location of Instructions
If this is a first-time installation, you must quick-start your Passport 5430.	*Installing and Operating the Passport 5430 Multiservice Access Switch*
Modify the Passport 5430 configuration file to add the Dual Synchronous PMC module and enable default Dual Synchronous PMC module software services.	• *Configuring and Managing Routers with Site Manager* • *Using the Bay Command Console (BCC)*

For the latest information, be sure to review the release notes and documentation change notice for your version of BayRS software.